

## Integrated Wavelength Router

### Abstract

- 5           A router comprises a demultiplexer arranged to receive an input WDM signal containing  $N$  wavelengths, and apply its output, namely, the  $N$  separated the wavelengths, to a binary tree containing  $\log_2 K$  stages of interconnected  $1 \times 2$  switches. The switches can be integrated, and have their outputs crossing each other at each stage. The outputs of the final stage are applied to, and combined in,  $K$  multiplexers, 10 which provide the  $K$  outputs of the router. If desired, a set of shutters can be interposed in the waveguides leading to the multiplexer inputs, thereby providing additional isolation.

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